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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,028	04/15/2004	Steven V. Jones	BR8843	7480

28268 7590 11/01/2005

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EXAMINER

SHARP, JEFFREY ANDREW

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,028

Applicant(s)

JONES ET AL.

Examiner

Jeffrey Sharp

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/15/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

[1] This action is responsive to Applicant's remarks/amendment filed on 09 August 2005 with regard to the Official Office action mailed on 01 February 2005.

Status of Claims

[2] Claims 1-21 are pending.

Specification

[3] The disclosure was previously objected to for indefiniteness, as it was unclear whether or not "shore" was referring to "Shore A" or "Shore D" scale. Applicant has successfully addressed these issues in the amendment filed on 09 August 2005. Accordingly, the objection(s) to the specification have been withdrawn.

Claim Objections

[4] Claims 5-10 were previously objected to because of informalities. Applicant has successfully addressed these issues in the amendment filed on 09 August 2005. Accordingly, the objections to the claims have been withdrawn.

Claim Rejections - 35 USC § 112

[5] The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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[6] Claim 11 was previously rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant has successfully addressed the issue(s) of indefiniteness in the amendment filed on 09 August 2005 by canceling claim 11, which was an omnibus-type claim.

Response to Arguments/Remarks

[7] Claim(s) 1-10 were previously rejected under 35 U.S.C. 103(a) as being unpatentable over Bell US-3,553,040 in view of King Jr. US-4,164,807 and Siebol US-4,170,920.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are moot in view of the following new grounds of rejection necessitated by amendment.

[8] Claim(s) 1-10 were previously rejected under 35 U.S.C. 103(a) as being unpatentable over Gaquere US-5,581,867 in view of Siebol US-4,170,920.

Applicant's arguments/remarks with regard to this reference have been fully considered, but are moot in view of the following new grounds of rejection necessitated by amendment.

New Grounds of Rejection

Claim Rejections - 35 USC § 103

[9] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

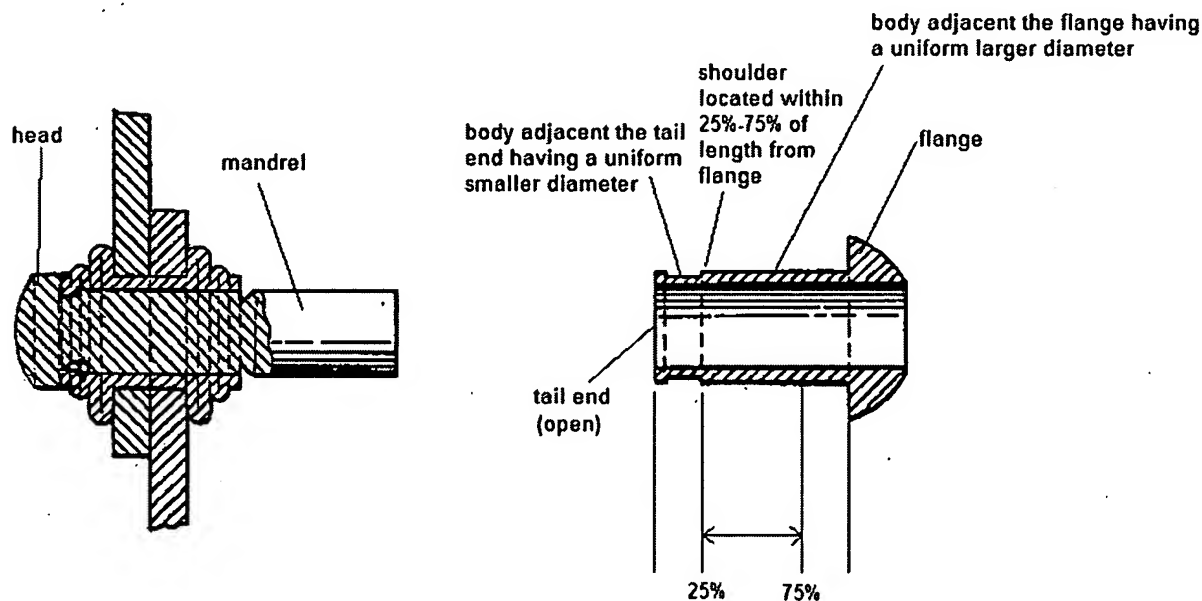
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[10] Claims 1, 2, 3, 5, 6, 10, 14, 17, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huck US-2,040,939 in view of Hull US-483,806.

In short, Huck substantially teaches a blind fastener (e.g., 'rivet') comprising a mandrel and a mandrel head disposed at the tail end of a cylindrical body, said cylindrical body having a flange, and a radially extending shoulder formed between two "different, uniform external diameters" at a location between about 25% and 75% of the length of said body remote from said flange.



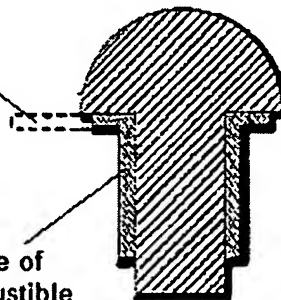
However, Huck is silent about a cylindrical sleeve of resilient material surrounding the larger diameter section of the body between the shoulder and flange.

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Hull suggests a (broadly) "resilient" cylindrical sleeve disposed around a blind fastener (e.g., 'rivet'), which may comprise "a portion" remaining exposed that provides a stop surface, in order to provide electrical insulation between components.

in some instances of single bars or plates with each other, wherein electrical alarms or safety devices are employed, it is essential in many instances that the plies, bars, or plates which are mechanically connected shall be electrically separated or insulated from each other.

the resilient material
"remains exposed for
providing a stop surface"



insulated sleeve made of
"any other non-combustible
material" and may be fixed
to the rivet "by frictional
contact, adhesion, a cement,
or any way desirable"

Therefore, it would have been obvious to employ a sleeve of resilient material, or "any non-combustible material" to the external portion of the rivet, in order to provide electrical insulation between the rivet, and/or the components being joined together.

[11] Claims 7, 8, 9, 12, 15, 16, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huck US-2,040,939 in view of Hull US-483,806 as discussed above, in further view of Rea US-2,759,082.

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Huck v. Hull suggest the limitations disclosed in the instant claims 1, 2, 3, 5, 6, 10, 14, 17, 19, and 21 as discussed above, including a cylindrical sleeve disposed around the blind fastener formed of "any non-combustible material".

However, Huck v. Hull is silent as to the hardness of the sleeve, and fails to expressly suggest a (broad) plastic compound, preferably a rubber compound, and more preferably a silicone-based rubber compound having a Shore A hardness between 50 and 80, and even more preferably, a silicone-based rubber compound having a Shore A hardness between 60 and 70.

Rea suggests a silicone based insulating sleeve (e.g., 'coating') that could be disposed on surfaces of a blind fastener (e.g., 'rivet') in order to provide insulation from electrical currents. It is well known that silicone compounds lie within the 10-80 Shore A durometer range, as evidenced by the attached Dow Corning NPL.

The coatings of electrical insulation 15 and 15a can be relatively thin, as both the heating and welding voltages can be relatively low, 3 to 10 volts, for example. This coating can also be placed on either mandrels 10 and 10a, or on the interior of rivets 6 and 6a, as described and preferred. Hard silicone plastics have been found satisfactory, as well as the type of insulation used on the enameled wire familiar in the art.

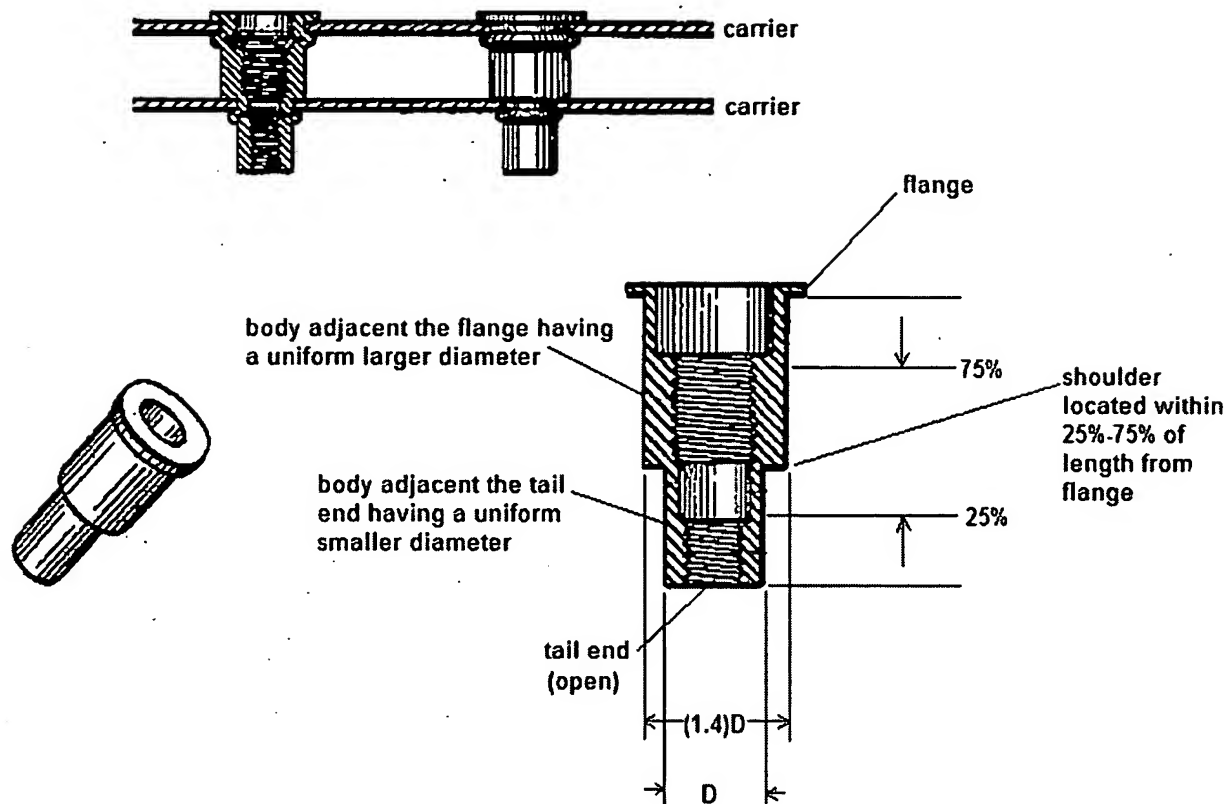
Rea US-2,759,082

At the time of invention, it would have been obvious to one of ordinary skill in the art from Rea's disclosure, that silicone based cylindrical sleeves could be advantageously used on blind fasteners instead of the asbestos sleeves taught by Hull, as a more environmentally-friendly equivalent means for 'electrically insulating' the fastener. Silicone would also be more advantageous than asbestos due to its superior sealing properties, as is known in the art.

Note that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

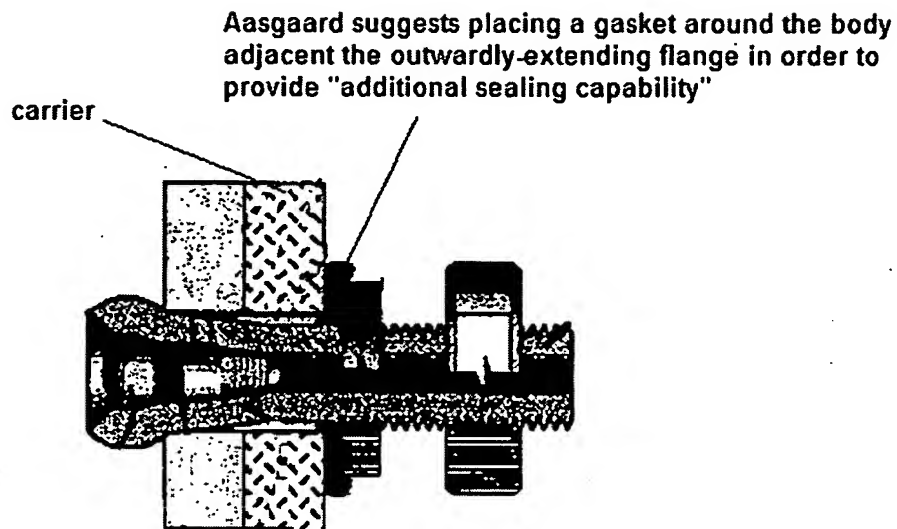
[12] Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huck US-2,040,939 in view of Aasgaard US-5,915,901.

In short, Huck appears to reasonably suggest each and every limitation in claims 1-21, including a blind fastener having a cylindrical body with either an open or closed tail end (closed end, of course for fluid-tight sealing applications) having a mandrel disposed therethrough for axially transmitting a setting force, said fastener having a cylindrical body, said cylindrical body having a flange, and a radially extending shoulder formed between two "different, uniform external diameters" at a location between about 25% and 75% of the length of said body remote from said flange. Huck's blind fastener is designed for enhanced sealing between joined panels.



However, Huck fails to suggest a cylindrical sleeve of resilient material disposed on the larger section of the body between the flange and shoulder, said resilient material being further defined by a silicone-based rubber having a Shore A hardness/durometer between 60 and 70.

Aasgaard suggests an additional rubber or plastic sleeve disposed around the cylindrical body adjacent the flange in order to provide "additional sealing capability". This sleeve has a "portion" that "remains exposed for providing a stop surface" for a carrier member. The sleeve may be made of rubber or plastic. It is well-known in the art that silicone is encompassed by "rubber" or "plastic", and normally has a durometer in the 10-80 Shore A range (see attached Dow Corning NPL).



Additionally, a washer or gasket 734 made of rubber, vinyl, plastic, or the like may be disposed between the outer work piece 726 and the head 736 of the rivet body 722 to provide additional sealing capability.

At the time of invention, it would have been obvious to one having an ordinary skill in the art, to employ a cylindrical sleeve around the body of Huck's fastener as suggested by Aasgaard, in order to provide better sealing between the flange and the carrier.

Conclusion

[13] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US-4,840,522 to Kurihara suggests a synthetic resin disposed about the entirety of a blind fastener, said resin having an 'exposed' portion that acts as a 'stop surface'.

US-4,170,920 to Siebol suggests an elastomeric sleeve around a larger diameter cylindrical portion of a blind fastener body for sealing purposes.

US-4,639,175 to Wollar suggests a sealing blind fastener having two different diameter portions to allow carriers having differently sized apertures to be joined together.

NPL Dow Corning http://www.dowcorning.com/content/rubber/rubberprop/mech_hardness.asp suggests silicone rubber generally has a Shore A durometer between 10 and 80.

[14] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

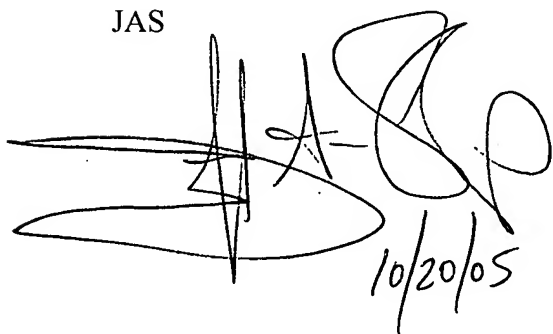
[15] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (571) 272-70740426. The examiner can normally be reached on 5:30 am - 4:00 pm Mon-Thurs..

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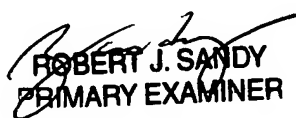
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAS



10/20/05



ROBERT J. SANDY
PRIMARY EXAMINER